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**(WHICH WILL BE PART II OF S. AND T. CORPS TRAINING)**

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**This Manual is the Text Book for the Training of all Supply and Transport and Regimental Transport Personnel in their Transport duties.**



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### TROOP TRAINING—DRIVING—MARCH DISCIPLINE.

Instructors must be patient and tactful, and they will refrain from discouraging those men who may be more backward than their comrades

3. Each recruit will be placed under a "driver instructor" who will look after him generally and teach him the general routine of barrack room and line duties, the cleaning and care of arms equipment and clothing, and, in stable, how to groom his animals and clean harness.

4. Instruction will be carried out in the following order:—

*1st Week.*

(1) The method of approaching and handling animals.

(2) Grooming, watering, feeding and picketing.

(3) The names and uses of the various articles of harness and saddlery.

(4) The methods of cleaning harness and saddlery.

(5) The general routine in lines, quarters and camps, and the necessity of cleanliness therein. Simple sanitary rules, personal and general, for lines, quarters and camps.

*2nd Week.*

(6) Foot drill.

(7) Scales of rations for animals.

*3rd Week.*

(8) Harnessing and fitting of saddlery and equipment.

(9) The causes, prevention and remedies for sore backs.

*4th and subsequent Weeks.*

(10) Packing and loading.
(11) Drill with pack animals.
(12) Driving.
(13) Guard and orderly duties

During each week's instruction a repetition will be made of that given in previous weeks, and it must be recognised that the work of training an illiterate villager to habits of method, order and reasoned commonsense is necessarily difficult and slow. It is probable that a catechism (sawál-o-jawáb náma), compiled in transport units and embracing essential rules regarding the conduct and duties of the recruit, would have good results

3. *Training of Remounts.*

1. Most remount mules, camels and bullocks have been broken to pack or draught work before purchase; when not so broken it will be necessary, in the first instance, to saddle them for a few hours daily, leaving them on their standings, about the third day they should be exercised, linked in threes, with their saddles on.

2. When animals have been trained in pack work, those which are suitable should be trained in draught. This is effected by using the "long reins" for about three days (Cavalry Training, 1907, page 85). The animal can then be attached to a breaking-sledge (ghasíta) for a further three days and afterwards put into a transport cart with another steady mule. Care must be taken not to work the animal too long, and to encourage it he should be hand-fed with a little green grass, carrots or grain after each lesson.

### 4. *Precautions in Training Remounts.*

1. Great attention must be paid to the correct fitting of the animal's saddlery and all articles; the draught breast-piece must be kept soft

2. Some mules become frightened and acquire the habit of leaning against the pole or of pulling away from it, but gentle treatment and an occasional judicious application of the whip on the pole side, or a brush tied to the pole, will usually overcome the fault. If, however, the habit has become habitual from fear and does not yield to these measures, the animal must be changed from draught to pack work for a sufficient period to enable him to overcome his fear of a cart.

3 For training young animals, only picked men should be employed and the following points will be impressed on them —

(1) Animals must be handled quietly.

(2) They must not be rushed at or snatched at by the bridle or jerked in the mouth.

(3) No shouting or noise must be permitted.

(4) An animal's ears must not be held or twisted unless it is not possible to hold it by other means.

# CHAPTER II.

## CARE OF ANIMALS.

### 5. *Principles to be applied.*

1. The official handbook, "Animal Management," deals at length with the care of transport animals and the use, from a veterinary standpoint, of the equipment directly connected with their work when used for riding, pack or draught Variations necessitated by Indian conditions are also considered.

2. An intelligent study of this book will acquaint transport officers with the requirements necessary to keep their animals in good working condition and to

[illegible]

regarding the general care of transport animals which require special system and method are—

(i) Watering, feeding and grooming.

(ii) Precautions for ensuring that animals receive their full allotment of grain and fodder which is varied by commandants according to season and work.

(iii) Shoeing and the general care of feet.

(iv) Rules for picketing, with a view to security and avoidance of accidents.

(v) Clipping, with regard to climate, season and wor-

## CHAPTER III.

### CARE AND FITTING OF HARNESS AND SADDLERY—REPAIRS—SHOEING AND CARE OF FEET.

#### 6. *Transport Equipment.*

The scales of equipment allowed for transport units and local transport are shown in Army Tables, Transport (India). This equipment can be considered generally under the following heads —

(1) Line gear.

(2) Pack saddlery and equipment.

(3) Vehicles and draught accessories.

(4) Workshop and veterinary equipment, repairing material and miscellaneous stores.

#### 7. *Care of Equipment.*

The expenditure of each unit on account of equipment is tabulated and compared annually with a view to enabling transport officers to realise the cost of their units under this head and to compare their expenditure with that of other transport corps. They are thus able to gauge the cost of renewals and repairs and the extent to which such expenditure can be controlled by careful management. Leather work is preserved by the application of preservative emollients, such as fat, dubbing or oil, while wood and iron and steel equipment are protected from rust by paint, tar or grease.

### 8. *Fitting Pack and Draught Harness.*

1. The use and fitting of saddles (including camel saddles) and draught harness are generally discussed in "Animal Management," and the precautions necessary to prevent and to deal with galls and injuries are fully detailed. The pannel of the present mule pack saddle is faced with leather, lined with serge and stuffed with wool and the accepted principles of fitting comprise a limitation of the size of the lining and the use of well teased wool which should not exceed the amount necessary to provide sufficient protection between the load and the animal's back. This amount will vary with the shape and condition of individual animals and it is essential that each pair of pannels should be of equal thickness. Modifications of the above pattern pannel have been designed and tested from time to time and an arrangement of pannels formed by folds of numnah is also in use and has, so far, given good results.

2. Injuries from pack saddles and the chambering of pannels are dealt with in "Animal Management."

3. To put together a mule pack saddle ready for use—

fasten the pannels tightly to the side bars by straps; attach the off chain of the breastpiece to the front hook of the off pannel and lay the breastpiece over the saddle just behind the front arch; fasten the off chain of the breech-
[illegible]

crupper ring, bring it over the rear arch and pass it under the front arch.

The saddle is now ready to be placed on the animal's back.

4. Before saddling, the bridle should be put on; a watering bridle with a bridoon and single rein is used with pack mules, the head-piece passing through the brow-band loops of the head collar. For draught mules a driving bit is used which is secured to the head collar by short connecting straps. When inserting the bit or bridoon in the mouth the animal should be induced to open his mouth by placing the fingers on the tongue above the incisor teeth. The bridoon should touch the corners of the mouth and should hang low enough not to wrinkle them.

5. The bit for riding or driving should be placed in the mouth so that the mouthpiece is one inch above the lower tush of a mule or pony and two inches above the corner teeth in the case of a mare. The curb chain should lie in the chin groove and be so adjusted that when the bit is pulled back to the greatest extent the angle which the bit forms with the mouth should not exceed 45° and should vary between that and 30° according to the degree of hardness of the mouth. The adjustment of the curb chain should be made by twist- [illegible]

6. In adjusting the head collar the headpiece should be parallel to and behind the cheek bone. The nose band should be about an inch below the cheek bone [illegible] should admit two fingers between it and the nose.

throat lash, when secured, should admit two fingers between it and the animal's jaw. The sized head collars as issued to transport units will not fit all animals and alterations will be necessary for those with small heads.

7. The saddle will be placed gently on the mule's back and drawn to its correct position from front to rear so as not to ruffle the hair of the back. The saddle should be clear of the play of the shoulders, but should not rest on the loins. The crupper will next be adjusted; it should be clear of the hair of the tail and, when secured, should admit of the breadth of the hand between it and the croup. The girths should be crossed under the belly and should be pulled tight as they will slacken when the load is put on.

8. The height of the breastpiece is regulated by the neck strap, the breastpiece is usually secured too high, thus pressing on the gullet which should be avoided. *Care and judgment are necessary to ensure correct adjustment*, but, as a rule, the lower edge of the breastpiece should be just clear of the points of the shoulder.

9. The height of the breeching is regulated by the croup strap; if fitted too low it impedes the action of the hind legs. As a rule the upper edge should be 4 to 5 inches below the dock. When adjusted, the breeching and breastpiece should admit of the thickness of the hand being passed round inside them.

10. All straps should be fitted into the leather keepers and runners and long straps shortened to a reasonable length.

11. Unsaddling—

The girths and breastpiece chains should first be loosened and the saddle shifted back to allow of the crupper being removed. When it is

time to take off the saddle the girths should be drawn over the top of the saddle and the breeching, breastpiece and crupper placed in

### 9. *Harnessing Draught Mules or Ponies in Carts.*

1. Saddle up as explained above. Secure the driving bits, hook the traces to the breastpiece and secure the trace supporting straps, hook the ends of the traces to the rear hooks of the saddle, buckle the connecting rod to the bit of each mule.

2. Back the mules into position on each side of the pole, raise the pole and place the curricle bar gently in the saddle swivels, secure the swivels, hook traces to the swingletrees and adjust the reins, crossing the inside branches from mule to mule.

3. The traces of each animal must be of equal length and should be so adjusted that the initial draught comes on the breastpiece In heavy draught the strain on the curricle bar will form a secondary support.

4. The supporting straps will be adjusted so as to support the traces, but must not lift them out of the straight line of draught from the swingletree to the breastpiece, which should be horizontal when in draught.

5. The length of the reins will be regulated so that there will be an equal strain on all four reins when drawn tight when the animals are in straight draught, i.e., each straight in front of its draw-bar. The reins will be buckled to the rings or to the centre or lower slots of the bit to suit the animal's mouth, the centre slot being suitable for average animals.

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### 10. *Repairs to Saddlery and Line Gear.*

The general principles regarding repairs are laid down in the Standing Orders of the Supply and Transport Corps. The personnel of transport units must be trained to recognise the necessity for prompt action to prevent the avoidable deterioration of equipment which will certainly follow any neglect to execute timely repairs. Every driver should be provided with a packing needle and twine and other necessary repairing material should be sent with small detached parties to enable temporary repairs and adjustments of saddle stuffing to be carried out in the absence of artificers.

### 11. *Shoeing and Care of Feet.*

As stated in Section 5, the shoeing and care of feet of transport animals is dealt with fully in "Animal Management." It has been found from experience that horses and bullocks working on metalled roads or in stony tracts require shoeing, whereas mules and donkeys, as a rule, can work without shoes in dry weather. Occasions, however, arise in wet weather when it is necessary to shoe them in considerable numbers; continuous rain may leave a surface of rough stones on metalled roads and protection is necessary for feet softened by continued moisture when working on stony tracts such as are met with on the Indian frontiers. For these reasons a proportion of shoes with nails is maintained as a reserve in transport units (Army Tables, Transport). The feet of unshod animals require regular attention to prevent the wall growing too long. The foot can be kept to a suitable length by rasping the lower edge of the wall when necessary. This is a precaution against tripping and will prevent the toe of the hoof from becoming ragged and broken.

## CHAPTER IV.

### Packing and Loading.

#### 12. *Methods of Instruction.*

1. The subject of preparing and packing loads for transit on wheeled or pack transport and their adjustment to ensure security and safe travelling in varying conditions of country and climate requires careful consideration and practical training of all concerned.

2 The various loads of military stores required for an army in the field are detailed in the official Field Service Regulations and Manuals. Whenever possible, stores are packed in 80 lbs (1 maund) loads and are thus suitable for mules, ponies or bullocks (2 maunds); or for camels (5 maunds); or for carts (10 maunds). The dimensions of loads, especially those packed in wooden cases, conform as far as possible to the best measurements for a pack mule 28" × 14" × 10".

3. [illegible] in pack- [illegible] and the [illegible] k mules, [illegible] each and four N. C. Os. will be a sufficiently large class for one instructor. The sections can be formed up either in line or in a square, facing inwards, each section having in front of it an animal, ready saddled and equipped, in marching order. Two men of each section work on the off side of the animal, one at the shoulder and one at the flank; two men work similarly on the near side.

In the case of camels, sections of six men [illegible] suitable, three men working on each side.

### 13. *Principles of Packing and Loading.*

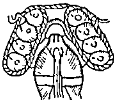
1. Methods for packing and securing loads must vary with circumstances, successful loading is obtained by common sense, practice and individual intelligence and by adhering to the principles of good loading. A compact load is easily carried, those which are bulky or badly packed involve extra strain on the animals and often loss of baggage

2. Loads should ride fairly high and should not hang below the belly or touch the animal. They should be as compact as possible and so arranged that a flat surface about 2′ × 1′ will rest against the saddle. This allows the load to lie close against the animal's side, prevents oscillation and helps to bring an even pressure over the weight-bearing surface of the saddle, which may be taken as almost the whole length and the two upper thirds of the pannel; if a load does not lie close to the saddle, oscillation will occur and it will not ride clear on narrow jungle paths or hill roads.

3. A load placed too high swings from front to rear as the animal moves. Loose girths allow the saddle and load to sway from side to side; a swaying load helps to cause galls.

4. The loads for each side of an animal should be of equal weight and similar shape. It is better to add weights, such as stones or bricks, to the lighter load than to leave them uneven. The adjustment of weight can generall
the loac
grain,
comb,
loads.

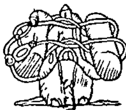
# PLATE I.



LOADS SECURED WITH SPARE ENDS TO PREVENT OUTWARD SAGGING



LOOP KNOT & HALF HITCH



LOAD ON CAMEL

Before loading an animal see that the saddle, girths and marching order equipment are correctly fitted and adjusted (Standing Orders, S. and T. Corps )

[illegible]

a small arm ammunition box the ring will be at the upper edge, but with a large load composed of kits the rings will be about one-third of the way down on the flat side. When tying the loading rope the free end is drawn through the leather covered loop and secured with a loop knot and half hitch (transport loop knot).

6. Loading ropes are liable to stretch, especially when wet ropes are exposed to the sun on the march; they should, therefore, be drawn as tight as possible. A certain amount of slackening is unavoidable at times, with the result that the loads hang too low and bear outwards from the animal instead of lying close to the saddle. To prevent this, always cross the spare ends of the Ordnance loading rope from one load to the other over the saddle and secure them with a loop knot and half hitch or other suitable knot, after getting a fair strain above the back.

### 14. *The Single Loading Rope.*

[illegible]

apart ; place the knotted rope over the saddle. Adjust the loads in their proper position against the saddle, pass the free ends of the rope over one load and then under the rope lying on the top of the saddle, then pass the free

ends over the second load and secure them to the original loops with loop knots and half hitches.

### 15. *Loading Camels.*

The work of loading a camel can be distributed as follows between a section of six men. Nos. 1 and 3 pack the off load and adjust it in position, Nos. 4 and 6 deal similarly with the near load, Nos. 2 and 5 lay out the loading rope and secure the free ends after the loads have been placed in position.

When the laden camel rises the packers should assist and steady the load with their hands.

### 16. *Testing Loads.*

During instruction the sections should accompany their laden animals over a track with small obstacles and note how the loads ride. They will then be able to remedy any defects in the packing and loading which may be observed. To unload an animal and unpack the load the above procedure should be reversed.

### 17. *Changing Loads.*

The instruction will be varied by changing sections round to different animals and loads.

Loaded animals waiting to move off should be kept on the move as they tire quickly if kept standing under their loads.

### 18. *Packing and Loading Carts.*

1 The correct adjustment of the loading over the axle and on each side of it requires careful attention Heavier and more solid articles should be placed on the floor of the cart, lighter and softer loads on top. In the case of bulky loads a convenient place should be left for the driver to sit on and drive from; when loads are compact and do not rise above the top of the raves the driving seat will be used

2. For a journey on a level road the load should be distributed so as to be slightly in excess to the rear so that when the driver mounts a true balance will be maintained. For stages which are mainly uphill the weight should be more to the front and for a downhill journey more to the rear. No part of the load should hang over the raves so as to touch a wheel.

3. The balance of a loaded cart can be ascertained by holding the pole in its position in draught. When the load has [illegible]

be to the front, high and well clear of the animal's back. Metal articles, such as buckets and tins, should be securely fastened so as not to rattle and frighten the animals. The driver's place during loading is at his animal's heads. A paulin is supplied with each cart to protect the load.

### 19. *Loads in Ordinary Use.*

Suitable methods for packing and securing certain loads are detailed below.

1. Service entrenching tools on the scale authorized for Infantry battalions. Packed in loading crates.

*No. 1 Mule (load 166 lbs.).*

6 shovels with helves.

8 picks, 6½ lbs., with helves.

2 felling axes with helves.

10 bill hooks.

2 spare helves for picks.

2 spoke shaves, 3½" (fastened in the bill-hook loops in each crate).

*Nos. 2, 3 and 4 Mules (loads 150 lbs.).*

As above, except that each mule carries 6 pick-axes instead of 8, and no spoke shaves.

*No. 5 Mule (load 161 lbs.).*

10 shovels with helves.

8 picks with helves.

2 spare pick helves.

2 spare shovel helves.

*No. 6 Mule (load 165 lbs.).*

6 shovels with helves.

6 picks with helves.

2 spare pick helves.

2 spare shovel helves.

2 jumping bars, 48", 1½" holes.

2. In packing and loading the crates care must be taken that no part of the tools touches the mule and that the helves and handles are clear of the animal's legs when in motion. The crate rings are placed on the saddle hooks and the chains are crossed between the saddle arches as an additional security in the event of the rings breaking. The girths attached to the crates should be secured carefully under the mule's belly.

3. Entrenching tools can be packed and secured with loading ropes and loaded on mules without crates, but this method requires much practice and care to be effective; it takes time and is difficult to carry out under service conditions and it is for these reasons that crates are supplied. In emergencies, however, the tools can be packed in horizontal loads, shovels being nearest the mules and picks outside and the tools secured in their places by interlacing the loading ropes, care being taken to prevent any part of the tools touching the mule and to keep the edges of the shovels and the points of the picks perpendicular. When possible these loads should be secured in bags or sacking for additional security.

4. *Small arm ammunition.*—Two boxes to a mule. [illegible]

5. *Kegs.*—Secure the kegs in the loading ropes, adjusting the rings so that the bungs will be uppermost when loaded. Interlace the ropes to prevent slipping.

6. *Flander's camp kettles.*—Six kettles with accessories packed inside form half a mule load and are secured in a holdall (sallita) of special pattern, fitted with rings. The kettles are fitted into each other with the handles on the

same side. The six lids are then fitted together and placed on the topmost kettle. The load is placed lengthways in the salita so that the lids will be at the mule's shoulders, handles outside, and the salita is then secured by straps. A little straw or hay placed inside each kettle will prevent the contents rattling.

7. Should salitas not be available camp kettles can be secured with loading ropes as follows. Place the load of [illegible]

of the load to prevent the kettles and covers coming apart, and secure on the same side as the handles. Load with the lids towards the front and cross the spare rope ends over the saddle from load to load.

8. *Soldiers' kits, great-coats and blankets.*—These require careful packing, otherwise being bulky they will sag and impede the animal's movements. A flat surface must be presented to the side of the saddle and the rings must be carefully adjusted to ensure the load riding at a suitable height on the saddle. When there is an odd kit it should be placed on top of the saddle and secured with the spare ends of the ropes.

9. *Field ovens.*—One oven (8 segments) to a mule. Place the first segment on the loading ropes, concave surface [illegible]

each segment and secure in the loops. Pass the spare

ends of the ropes round the segments and secure them, When loaded the points of the segments will be uppermost and the convex side towards the mule

10. *G. S. tent, 160 lbs*—One tent to a mule. Spread out the tent, double it at the ridge and turn in the triangular curtains, roll up and throw in all ropes Fold over from the top and bottom, turning in about 18 inches, until the tent is folded in a strip about 13½ feet long and 18 inches wide Lay the tent on the holdall (salita) and lace the salita across the tent. Divide the poles and pegs equally between the two pole bags, taking care that the pegs do not slip into the corners of the bags. Place a pole bag about 2 feet from each end of the tent and roll up tightly from both ends towards the centre, leaving a space of 2 feet between the rolls Place the loading ropes under the rolls with the iron rings close to the corners of the rolls. Cross the free ends of the loading ropes, pass them through the loops and secure. Lift the load over the animal's quarters taking care not to touch it with any part of the load, place the load on the saddle, with the rings on the saddle hooks, settle the load until it rides evenly and secure the spare rope ends over the saddle.

11. *G. S. tent, 80 lbs*—Two tents to a mule. Lay the tent on the ground, double at the ridge, turn in the triangular curtains, roll up and throw in all the ropes. Fold [illegible] the other [illegible] a thinner [illegible] let on the [illegible] m to [illegible] Place the tent in the salita and lace the latter. Disjoint the poles and pack in the pole bag on top of the salita secure the load in the loading ropes.

12. *G. S. tent, 40 lbs.*—Four tents to a mule. Fold and pack the tents as directed for the 80 lbs. G. S. tent, except that the poles are packed with each tent in its salita, which has an opening to allow the pole ends to project. Place two tents together, poles uppermost, and secure in loading ropes.

20. *Packing and Loading on Camels.*

1. The general principles of loading camels have already been explained and methods will now be detailed for dealing with certain loads which are more suitable for camels than for other pack animals. The more important of these are the larger military tents used in India, *viz.*, I. P. tent, 800 lbs., and Staff Sergeants' tents, 420 lbs. Second line baggage and maintenance stores beyond rail heads are also carried on camels in war under Indian conditions. Boxes and bags of supplies which are usually one maund each can be loaded as previously described, with two maunds on each side and one bag or box on the top of the saddle.

2. For miscellaneous loads, such as soldiers' kits, loading nets are often more suitable and a percentage of these is provided (Army Tables, Transport). They require careful adjustment so as to equalise the loads, and they are secured by regulating the draw rope which runs through the edge of the net. The single loading rope can also be used as an additional security.

3. *I. P. tents, 800 lbs.*—One tent to two camels. *First camel.*—Two standing poles, one ridge pole, arm rack, two flies, two mallets, two buckets, two lanterns, eight bamboo props. The loading rope is placed across the saddle. The poles, arm rack and bamboos are divided into two equal loads, *e.g.*, off side, one standing pole and

ridge pole; near side, one standing pole, arm rack and eight bamboos Place these loads against the saddle, spikes of poles to the front, and take a turn of the rope round the loads and the saddle bars (bozdán) Bring the

The tent is now placed on the salíta which is then laced. Pass the tent across the saddle and over the tent poles and adjust it until the load rides evenly Pass the spare ends of the loading rope across the tent on each side, draw tight, and secure them to the saddle bars Secure one lantern, one bucket and one mallet on each side.

*Second camel* —Divide the tent walls (kanáte) into two loads, secure them in the loading rope and load level with the saddle bars Lay the double peg bag across the saddle, adjust it until the load balances and secure with spare ends of loading rope.

4. *Staff Sergeants' tent, 420 lbs* —One tent to a camel—a strong camel required. Divide the tent poles and eight small bamboos into two loads, secure with the loading rope, loading them level with the upper saddle bars. Fold and load the tent similarly to the I. P. tent, place the

bucket on either side of the tent.

22. *Motor Traction.*

The use of light motor lorries and tractors for military work is now almost general in countries provided with sufficiently good roads, culverts and bridges Their speed and long working hours far eclipse the powers of animal draught and where a sufficiency of good roads is available the use of motor transport goes far to solve the difficult problems of transit and distribution of the vast quantities of supplies and military stores required by modern armies.

23 *Cart Components.*

Information regarding the construction and care of two-wheeled mule and bullock carts and ambulance tongas, which are the principal vehicles used for military transport with Indian Forces, will be found in " Notes on Army Transport Carts and Tongas " published in 1910; the plates accompanying these notes give complete details and those regarding carts have been reproduced in this Manual

## CHAPTER VI.

### General Training of Transport Personnel—Field Movements.

#### 24. *Object of Instruction.*

The object of instruction in field movements is to enable transport personnel to carry out their duties in cantonment and in camp with system and to cultivate those habits of discipline which are necessary in the personnel of all branches that are liable to come under an enemy's fire. This instruction will enable transport ranks to comply with the principles laid down in Field Service Regulations, Part I (Chapters II, III, IV, X), which should be studied with reference to the tactical work of transport columns and convoys in war.

#### 25. *Signals.*

The following signals will be employed to represent the words of command mentioned. Before an order or signal is given the whistle will be sounded to attract attention, the men looking towards their commander at once. Those using signals should, as far as possible, face the same way as those to whom the signals are made and should use whichever arm will be more clearly visible.

| | |
|---|---|
| *"Advance"* or *"Forward."* | Arm swung from rear to front below the shoulder. |
| *"Retire"* . . | Arm circled above the head. |
| *"Walk"* or *"Quick March"* (*from faster pace*). | Hand raised in line with shoulder, elbow bent. |

| | |
|---|---|
| *"Trot" or "Double"* | Clenched hand moved up and down between thigh and shoulder. |
| *"Halt"* | Arm raised at full length above the head. |
| *"Incline"* | Body or horse turned in the required direction and arm extended in line with shoulder. |
| *"Wheel"* | Circular movement of the extended arm in line with the shoulder in the required direction. |
| *"Dismount"*, *"Lie Down."* | Two or three slight movements of the open hand towards the ground. |
| *"Mount"*; *"Stand Up."* | Two or three slight movements of the open hand upwards, palm uppermost. |
| *"Extend"* | Arm at full length over head and waved a few times slowly from side to side. |
| *"Close"* | Hand held straight up above the head and moved about rapidly. |

The signals "Extend" and "Close" are useful when transport moving on a broad front has to pass broken ground, nullas, etc. In such cases mounted men will ride ahead to point out crossings and will signal to close or extend.

26. *Pace, Time, Frontage, Depth and Distance.*

| | |
|---|---|
| *Pace* | In quick time, the length of a pace is 30 inches; in double time, it is 40 inches. |

| | |
|---|---|
| *Time* . . . | In quick time, 120 paces; and in double time, 180 paces are taken in a minute. |
| *Frontage* . . | Man in the ranks, 1 pace.<br>Pack mule or pony, 2½ paces.<br>Camel, 3½ paces.<br>Cart, 3 paces. |
| *Depth* . . . | File of 3 mules or ponies, 10 paces.<br>File of 3 camels, 14 paces.<br>Cart (a file), 5 paces. |
| *Distance* . . | Between single animals and files of mules and ponies, 1 pace.<br>Between camels, 2 paces.<br>Between carts, 3 paces. |
| *Section* . . | Four files. |

When working with animals or carts, the frontage of a section is—

| | |
|---|---|
| Pack mules . . . . . | 10 paces. |
| Pack camels . . . . . | 14 " |
| Carts . . . . . . | 12 " |

But the frontage of pack sections can be reduced by 15 % when working with unladen animals.

## Squad Drill.

### 27. *Position of Attention.*

| | |
|---|---|
| *"Attention"* . | "Heels together and in line. Feet turned out at an angle of about 45°. Knees straight. Body erect, and carried evenly over the |

"*Attention*"—
contd.

thighs with the shoulders (which should be level, and square to the front) down and moderately back; this should bring the chest into its natural forward position, without any straining or stiffening. Arms hanging easily from the shoulder as straight as the natural bend of the arm, when the muscles are relaxed, will allow, but with the hands level with the centre of the thighs. Wrists straight. Palms of the hands turned towards the thighs, and the heel of the hand and the inside of the finger-tips lightly touching them, fingers hanging naturally together and slightly bent Neck erect. Head balanced evenly on the neck, and not poked forward, eyes looking their own height and straight to the front.

"The weight of the body should be balanced on both feet and evenly distributed between the fore part of the feet and the heels

"The breathing must not in any way be restricted, and no part of the body should be either drawn in or pushed out.

"The position is one of readiness, but there should be no stiffness or forced unnatural straining to maintain it."

28. *Standing at Ease.*

| | |
|---|---|
| "*Stand at ease*" | "Keeping the legs straight, carry the left foot about one foot-length to the left so that the weight of the body rests equally on both feet, at the same time carrying the hands behind the back and place the back of one hand in the palm of the other, grasping it lightly with the fingers and thumb, and allowing the arms to hang easily at their full extent. (It is immaterial which hand grasps in the other.)" |

Recruits will fall in in the above position.

| | |
|---|---|
| "*Squad—Attention.*" | "On the command 'attention' spring up to the position described in Section 27." |

If the command "Stand easy" is given, men will be permitted to move their limbs, but without quitting their ground.

When standing easy, on the caution "Squad" being given, every man will at once assume the position of standing at ease.

A driver with pack mules stands to "Attention" as before detailed on the near side of the first mule, holding the left rein with the right hand near the ring, the left hand hanging down straight by the thigh.

In standing easy, a driver may move his limbs, but must not quit the ground or hold of his mule.

A driver with a pair of draught mules or ponies not hooked in stands between them to ' Attention " holding each animal by the rein near the ring

In " Standing at ease " or " Standing easy " he will act as before detailed.

A driver in his cart sits at " Attention " as detailed in Section 51, paragraph 4 (1) and (2)

In " Sitting at ease " or " Sitting easy " he may slacken his reins, lower his whip, and move his limbs, without quitting his seat or hold of his reins.

On the command "In front of your horses (mules, camels)," a driver will place himself in front of and facing his animal holding each rein close to the bit and slightly raising the animal's head.

In this position a driver will shew an animal for inspection or lead it through a narrow gate.

In the case of a camel the driver will stand in front of the animal facing it and holding the leading rope in the left hand.

29 *Turnings.*

| | |
|---|---|
| *"Turning to the right—One."* | " Keeping both knees straight and the body erect, turn to the right on the right heel and left toe, raising the left heel and right toe in doing so.<br>" On the completion of this preliminary movement the right foot must be flat on the ground and the left heel raised, both knees straight and the weight of the body, which must be erect, on the right foot." |

| | |
|---|---|
| "One"—contd. | motion, to the head, palm to the front, fingers extended and close together, point of the forefinger one inch above the right eye, thumb close to the forefinger, elbow in line and nearly square with the shoulder." |
| *"Two"* . . | "On the word 'two' cut away the arm smartly to the side." |

*Caution—Salute, judging the time.*

| | |
|---|---|
| *Salute* . | "On the word 'Salute' go through the two motions described in 'One' and 'Two.'" |

*Saluting to the Side.*

*Caution—Right (Left) hand salute.*

As in saluting to the front, except that as the hand is brought to the salute the head will be turned towards the person saluted.

When a man passes an officer he will salute on the third pace before reaching him; if carrying a whip or stick he will place it under the disengaged arm.

When addressing an officer he will halt two paces from him and salute. He will also salute before withdrawing.

A man without his puggree, or if he is carrying anything to prevent him saluting will, if standing still, come to "Attention" as an officer passes, or if walking he will turn his head towards the officer in passing him.

An unarmed party marching will receive the command "Eyes Right" or "Eyes Left" from the non-commissioned officer or man in charge when passing an officer,

The arms must not be stiffened, but should swing freely and naturally from the shoulders, the right arm swinging forward with the left leg and *vice versâ*. If the arms are swung in this way they will bend naturally at the elbow as they swing forward and will straighten as they swing back, the movement being free without being forced.

| | |
|---|---|
| "*Quick-march*" | "On the word 'March' the squad will step off together with the left foot, in quick time" |

32. *The Halt.*

| | |
|---|---|
| "*Squad—Halt*" | "On the word 'Halt' the moving foot will complete its pace, and the other will be brought up in line with it" |

33. *Marking Time.*

| | |
|---|---|
| "*Mark-time*" | "On the word 'Time' the foot then advancing will complete its pace, after which the time will be continued without advancing, by raising each foot alternately about six inches, keeping the feet almost parallel with the ground, the knees raised to the front, the arms steady at the sides, and the body steady On the word 'Forward' the pace at which the men were moving will be resumed." |

34. *The Double-March.*

| | |
|---|---|
| "*Double-march*" | "Step off with the left foot and double on the toes with easy swinging strides, inclining the bod |

| | |
|---|---|
| *"Double-march"* — contd. | slightly forward, but maintaining its correct carriage. The feet must be picked up cleanly from the ground at each pace, and the thigh, knee and ankle joints must all work freely and without stiffness. The whole body should be carried forward by a thrust from the rear foot without unnecessary effort, and the heels must not be raised towards the seat but the foot carried straight to the front, and the toes placed lightly on the ground. The arms should swing easily from the shoulders and should be bent at the elbow, the forearm forming an angle of about 135° with the upper arm (*i.e.*, midway between a straight arm and a right angle at the elbow), fists clenched, backs of the hands outwards, and the arms swung sufficiently clear of the body to allow of full freedom for the chest. The shoulders should be kept steady and square to the front and the head erect." |
| *"Squad—Halt"* . | "As in Section 32, at the same time dropping and partly opening the hands." |

The driver recruit will be taught to mark time in double time, the hands being raised and the fists clenched as when marching in double time, but the arms kept steady.

From the halt the word of command will be "Double—Mark time."

### 35. *Turning when on the March.*

| | |
|---|---|
| "*Right-turn*" . | "On the word 'Turn' which should be given as the left foot is coming to the ground, each driver will turn in the named direction and move on at once without checking his pace." |
| "*Left-turn*" . | "On the word 'Turn' which should be given as the right foot is coming to the ground, each driver will turn to the left and move on without checking his pace." |

A driver [illegible] left foot, [illegible] 'Turn' [illegible] he ground

### 36. *Wheeling.*

| | |
|---|---|
| "*Right-wheel*" . | "When marching in file, the leading man will move round to the right, the remainder following in succession in his footsteps without increasing or diminishing their distances." |

### 37. *Formations and Movements without Animals and Vehicles.*

The men will fall in in troops (32 men) in line in rank and will be divided into half-troops, sections (4 and half-sections (2 men).

Lance-naiks will fall in on the right of their sections, half-troop commanders three paces in front of the centre of their half troops, troop commanders six paces in front of the centre of the troop When in line the Commanding Officer will be 20 paces and the Sergeant-Major 16 paces in front of the centre, sub divisional commanders will be 10 paces in front of the centre of their respective subdivisions

Words of command will be given in the manner described in Infantry Training

38 *Telling off a Troop.*

| | |
|---|---|
| *"By sections—Number"* | "The right hand man tells off 'One,' the second 'Two,' and so on." |
| *"Half sections—Prove."* | "The even numbers of each section extend their left arms to the front in line with the shoulder and drop them on the command 'As you were'" |
| *"Sections—Prove."* | "The left hand man of each section acts as above." |
| *"Sections—Tell off."* | "Each lance-naik calls out the number of his section, 'One,' 'Two,' etc., commencing from the right." |

"Numbers one to four—Right half-troop. Five to eight—Left half-troop"

"Right half-troop—Stand at ease"

"Left half-troop—Stand at ease."

Each single man in the ranks (lance-naik or driver) constitutes a file.

Assembly formation is troops in close column, *i.e.*, normally with 12 paces distance between troops.

### 39. *Movements from Line or Column.*

*Advancing from a Flank.*

| | |
|---|---|
| "*Advance from the right (left) in file*" (*half-sections, half-troops and troops*). | "The right (left) hand man (half-section, etc.) of the line will advance, the remainder following in succession by the diagonal march, stepping out, when necessary, to close up, and cover in rear. When necessary the head of the column may be ordered to step short until all have closed up." |

In all advances by troops, half-troops and sections in line, the centre lance-naik will direct and should be named. The interval between men in file is one pace; half-sections, two paces; sections, half-troops and troops, wheeling distance.

### 40 *Movements to a Flank from Line or Column.*

| | |
|---|---|
| "*Sections (half-sections)—Right (left)*"—"*Quick-march.*" | "Sections (half-sections) wheel to the right (left) and receive the command 'Forward' on completion of the 'Wheel.'" |
| "*Files—Right (left)*"—"*Quick-march.*" | "Each file turns to the right (left) and the whole move off together." |
| "*Head—Right (left) wheel*"—"*Forward.*" | "The leading section, half-section or file wheels as ordered and moves straight on when the command 'Forward' is given." |

In wheeling, the inner man of each section or h
section marks time, moves round gradually and '

outwards, the outer man moves at a full pace and looks inwards, the remainder look outwards towards him, moving gradually round and the whole mark time when square.

41 *Retirements from a Flank.*

The instructions are the same as for movements to a flank, the head of the column changing direction on completion of the first wheel

42. *Retiring in Line or Column.*

| | |
|---|---|
| "*The line or column will retire*"— "*About turn*" | "The whole will turn about." |

INCREASE OR DIMINUTION OF FRONT.

43. *Increasing the Front on the March.*

From files to half-sections, half-sections to sections, etc., when the advance has been from the right.

| | |
|---|---|
| "*Form half-sections*" (*sections, half-troops, etc.*). | "The odd numbers (right half-sections, sections, etc.) continue to advance and the remainder form up on the left of their respective half-section, section, etc., by the diagonal march, stepping out to regain distances, the head of the column stepping short, if necessary, until the movement has been completed." |

If required to form from the halt, the command will be "To the halt—Form half-sections, etc.," on which the

leading file, half-section, etc., will continue to move on 6 paces and then halt, the remainder forming up as above, but in quick time.

When the advance has been from the left, the movement will be carried out in a similar manner, the men in rear forming up on the right of the leading file (half-section, section, etc.).

## 44. *Diminishing the Front on the March.*

From troops to half-troops, sections, etc.

| | |
|---|---|
| "*From the right (left)—Form half-troops*" (*sections, etc.*). | "The right (left) half-troop (section, etc.) continues to advance, the remainder mark time till clear, incline to the right and cover in rear." |

When working by troops, half-troops, and sections, their leaders will repeat the necessary commands and signals for forming, wheeling, etc.

## 45. *Formations and Movements with Animals and Vehicles.*

When working with animals and vehicles the formations and movements described in the foregoing sections will be carried out with such modifications as may be necessary to meet the organization of the different units. Words of command will be in accordance with Cavalry Training, *e.g.*, "Walk-march" for "Quick-march." For changing direction of columns the words of command will be "Head—Half-right (left)—Forward."

When a column retires the word of command will be "Sections (half-sections or files)—About," so as to bl

the road for as short a period as possible. Retiring a long column by wheeling the head about would obstruct the road for a considerable time.

### 46. *Inspections*

At inspections, corps will be drawn up in line or column of troops or half-troops, according to the space available, all details not in command of sub-divisions, troops or half-troops, or in charge of mules or vehicles will be formed in several ranks at 2 paces distance between ranks, 20 paces in rear of the centre of the line or, if the unit is in column, 10 paces from the right flank, midway between the head and rear of the column. The Quartermaster-serjeant will be 4 paces in front of details. On the march the above details will follow in rear in sections.

### 47. *Instruction with the Sword.*

The squad will be formed in single rank at two paces interval.

*Caution—By numbers—Draw Swords*

| | |
|---|---|
| *"One"* . . | "Seize the scabbard with the left hand and grasp the hilt with the right hand smartly and draw the blade a few inches, edge to the rear." |
| *"Two"* . . | "Draw the sword slowly and bring it to the 'Recover,' *i.e.*, with the hilt in line with the bottom of the chin, blade perpendicular, edge to the left, elbow close to the body." |

| | |
|---|---|
| *"Three"* | "Lower the sword smartly to the 'Carry,' i.e, with the hand in front of the elbow, little finger in line with it, blade perpendicular, edge to the front." |

In quick time go through above motions, observing a slight pause between each.

| | |
|---|---|
| *"Slope-swords"* | "Relax the grasp of the last three fingers and, without moving the hand, let the sword fall lightly on and in the centre of the shoulder." |
| *"Stand at ease"* | "Carry left foot 10 inches to the left, both knees straight." |
| *"Attention"* | "Come to position of 'Slope-swords.'" |
| *"Carry swords"* | "Come to the 'Carry.'" |

*"Return Swords (by numbers)."*

| | |
|---|---|
| *"One"* | "Carry the hilt smartly to the hollow of the left shoulder, blade perpendicular, edge to the left, at the same time bring forward the mouth of the scabbard about 3 inches, then, by a quick turn of the wrist, drop the point into the scabbard." |
| *"Two"* | "Let the sword fall smoothly into the scabbard." |
| *"Three"* | "Drop the right hand smartly to the side." |

*In "Quick time."*—"Go through the above motions observing a slight pause between each."

transport units should move in succession by sections from the original alignment On reaching the first point the head will wheel to the left and on reaching the second point the leading troop will receive the command, "Sections—Left" and advance in line on the point A (Ceremonial) The remaining troops and units will follow the movements of the leading troop.

In marching past, commanding officers of transport units will be two horse lengths in advance of the leading troop or sub-divisional commanders, who will be two horse lengths in front of their troops or sub-divisions. As each troop commander arrives within 10 yards of the reviewing officer he gives the command, "Eyes right," the officers salute and all ranks look towards the reviewing officer while passing before him. When marching past by sections, half-sections or files, a distance of four horse lengths will be preserved between troops.

## CHAPTER VII.

### Troop Training—Driving—March Discipline.

#### 49. *Troop Training.*

1. As in the case of other branches of the army, special periodical training of transport units is necessary to enable all ranks to review their previous training and to bring their technical knowledge up to date. Owing to pressure of general work at certain seasons and to frequent calls for transport in connection with the training of other units, it is not possible to fix definite periods during which transport can be withdrawn from ordinary work for its own separate training, but the following method is sufficiently elastic to admit of the required instruction being carried out

Each troop of a transport unit will be withdrawn from ordinary duty at least once annually for at least ten working days, during which period the following instruction will be carried out by troop commanders under the guidance of the staff of the corps —

(a) Stable management and care of animals in cantonments and in camp

(b) Fitting saddlery and harness.

(c) Small repairs to saddlery and line gear.

(d) Packing loads and loading animals and carts.

(e) Driving loaded and unloaded carts and loading and driving pack animals.

(f) Riding instruction for mounted ranks.

(g) Duties in [illegible] and bivouacs.

(h) The use of signals and delivering messages written and verbal.

(i) Field movements (in marching order), regulation of pace and march discipline. Removing loads and harness of dead or wounded animals and replacing wounded draught animals under fire

(j) Entraining animals, equipment and carts.

(k) General care of carts

### 50 *March Discipline.*

The rules for march discipline will be found in the Field Service Regulations, Part I They deal with march formations, distances, pace, order of march, and lay down special rules for transport on the march. In India the normal march formations for transport are—

| | |
|---|---|
| Carts . . . . | Single file ; |
| Pack mules, ponies and camels | Single file or half-sections ; |
| Pack bullocks or donkeys. | In droves ; |

and the field movements described in Chapter IV enable these formations to be modified to meet varying conditions of road and country.

The allotment and use of transport in war on lines of

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### 51. *Driving Carts and Leading Animals.*

1. Good driving and leading will enable men and animals to perform marches and overcome difficulties

of the road with comparative ease and without avoidable strain. Ill-trained drivers tire their animals prematurely and cause unnecessary damage to harness, vehicles and loads.

2. A led pack animal should be trained to step out without being dragged and to check or halt as required, the driver marching level with the animal's shoulder. The reins of the bridle should be taken over the head and held in the right hand, the little finger between them, and the end of the reins in the left hand. Animals should be taught to lead on both sides, if any difficulty be experienced, an assistant can walk behind the animal and may crack a whip or flick him on the hocks.

3. Pack mules are secured together in strings of three. The forefoot shackles of the second and third mules are fastened through the noseband ring of the noseband of the head collar and the forefoot chains of these mules are fastened on alternate sides to the rear arch of the saddle of the mule in front of them. The practice of fastening the shackles through the jowl piece of the head collar should not be allowed as it causes inconvenience to the animal, makes him lead badly and wears the head collar unduly.

4. For instruction in cart driving, the following rules should be followed.—

(1) The driver will sit on the right side of the cart, with the feet planted firmly in front of the body, using the wooden seat when the cart is empty, or when the load admits of his using it, when the stores are too bulky to allow this, he will sit on the top of the load.

(2) He will hold the reins in his left hand, the near rein between the forefinger and thumb, the off rein tween the second and third fingers, thumb and f

the animals' mouths when they are pulling straight, *i.e.*, each animal in front of its drawbar.

(14) In going uphill the reins must be eased; when going downhill, the reins must be shortened in the hand and the animals kept moving at a steady pace

(15) It is most necessary to impress on the drivers that the best results can be obtained by treating the animals well, and that roughness and unnecessary dragging or jerking their mouths can only result in failure.

(16) The whip must be used with caution and should be lightly applied. Occasionally when a slug requires to be brightened up, he may be given two or three sharp cracks, but for an honest working animal the whip should only be used as a signal, and not as a punishment. The chief use of the whip in double harness is to make the animals pull equally.

5. Cart drivers will be taught to negotiate obstacles such as low banks and shallow ditches so as not to injure their vehicles or animals. All such obstacles will be taken slowly by each man and never rushed as this excites and confuses the animals; they will be taught to ascend a low bank steadily and on the cart reaching the top the reins will be shortened and the cart taken slowly down the bank or ditch. On reaching the bottom of a ditch or "Irish bridge" the reins will be eased and the animals [illegible]

a manege (open will do) and a driving track with obstacles are required. The attached sketch gives suitable dimensions for a driving track and obstacles.

6. On narrow or broken tracks it is often desirable to let pack animals loose and allow them to proceed independently. This freedom allows each animal to pass difficult points and cross obstacles at his own pace, but is [illegible]

## CHAPTER VIII.

### TRANSPORT OF ANIMALS AND VEHICLES BY SEA AND RAIL.

#### 52. *Movements by Rail.*

[illegible]

of space, requires careful attention and is described in detail in the Field Service Manual. When railway vehicles are not available for practice an extemporised enclosure of posts and rails of the same dimensions as a railway wagon will answer the purpose. (*Vide* also Field Service Regulations, Part I.)

The ventilation of closed vehicles and precautions against fire are important points. When animals are carried in open trucks there is always a danger of fire from engine sparks which readily sets fire to gear and forage and constant vigilance is required.

#### 53. *Sea Transport.*

The embarkation and landing of transport animals and vehicles and their care during sea voyages are important considerations in connection with an overseas expedition. (*Vide* Field Service Regulations, Part II.) The details of sea transport of animals are dealt with in "Animal Management," and it has been proved by experience that forethought and care will enable animals to undergo long voyages with little detriment to their condition and usefulness. The incidence of casualties on

sea voyages, especially in camels, has been much reduced of late years and the instructions laid down for feeding and management should be carefully considered and observed as far as possible.

The method of storing transport vehicles depends on the accommodation available and the part of the ship in which it is provided, but the packing and storage will generally be similar to that laid down for railway transit.

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